

form a pack and brazed together so as to form separate channels for two media between alternating pairs of plates;

a separation zone having a blocked-off space formed by a barrier of valleys and peaks in contact with each other in alternate pairs of plates at a distance from the connections, a brazing at the edges of the plates and a brazing at the connections, which blocked-off space cannot be reached by any one of the media except during leakage, in such a way that the medium which is not to reach and flow through the respective connection is blocked at the barrier between one pair of plates, whereas the other medium can flow through the separation zone in adjacent channels in surrounding pairs of plates and through the respective connection; and

a leakage vent extending from the blocked-off space to the exterior.

2. (Once Amended) A heat exchanger according to claim 1, wherein the blocked-off space is formed by a separation groove, running at a distance from each connection and separating the connection towards the respective corner.

3. (Once Amended) A heat exchanger according to claim 1, wherein the leakage vent includes holes, arranged in rotational symmetry through the plates, such that the holes register when turning every other plate 180°.

4. (Once Amended) A heat exchanger according to claim 3, wherein the holes are located at an angle of 45°, centered between the edges of the plates.

5. (Once Amended) A heat exchanger according to claim 3, wherein the holes are located close to one edge of the plates.

6. (Once Amended) A heat exchanger according to claim 1, further comprising a sensor for detecting leakage located in one or more blocked-off spaces.

7. (Once Amended) A heat exchanger according to claim 1, further comprising a pipe

running from one or more closed-off spaces, said pipe being connected to a sensor for detecting leakage.

8. (Once Amended) A heat exchanger according to claim 7, further comprising plural pipes connected to a common sensor.

9. (Once Amended) A heat exchanger according to claim 6, wherein said sensor is connected to a security system.

10. (Once Amended) A heat exchanger according to claim 2, wherein the leakage vent includes holes, arranged in rotational symmetry, through the plates, such that the holes register when turning every other plate 180°.

11. (Once Amended) A heat exchanger according to claim 2, further comprising a sensor for detecting leakage being located in one or more blocked-off spaces.

12. (Once Amended) A heat exchanger according to claim 3, further comprising a sensor for detecting leakage being located in one or more blocked-off spaces.

13. (Once Amended) A heat exchanger according to claim 4, further comprising a sensor for detecting leakage being located in one or more blocked-off spaces.

14. (Once Amended) A heat exchanger according to claim 5, further comprising a sensor for detecting leakage being located in one or more blocked-off spaces.

15. (Once Amended) A heat exchanger according to claim 2, further comprising a pipe running from one or more closed-off spaces, said pipe being connected to a sensor for detecting leakage.

16. (Once Amended) A heat exchanger according to claim 3, further comprising a pipe running from one or more closed-off spaces, said pipe being connected to a sensor for detecting leakage.

17. (Once Amended) A heat exchanger according to claim 4, further comprising a